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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,040	11/02/2001	Gordon Good	13220.012001; P5847	1244

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EXAMINER

NGUYEN, MINH CHAU

ART UNIT PAPER NUMBER

2145

DATE MAILED: 02/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/003,040

Applicant(s)

GOOD ET AL.

Examiner

MINH-CHAU N. NGUYEN

Art Unit

2145

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2001.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-30 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/11/03; 3/7/02.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Drawings

The drawings are objected to because descriptions of step 206 in figure 6 and in specification are different. Such as in figure 6, step 206 is "supplier begins replication session to replication supplier"; but in specification, step 206 is "supplier begins a replication session to a replication consumer". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

1. Claim 3 is objected to because of the following informalities:

As per claim 3 cannot depend on itself.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-10, 21-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Hirashima et al. (Hirashima) (US 6,301,589 B1).

3. Regarding claim 1, Hirashima teaches a method of schema replication in a directory server, comprising:

updating a schema at a replication supplier (Col. 2, L. 8-10 and L. 19-26; and Col. 8, L. 9-13, and L. 32-42, and L. 64 – Col. 9, L. 4);

computing a change sequence number (Col. 3, L. 12-17; and Col. 10, L. 49-55);

placing the change sequence number in an attribute on the replication supplier (Col. 2, L. 19-26; and Col. 11, L. 30-43);

initiating a replication session to a replication consumer (Col. 9, L. 61 – Col. 10, L. 2);

reading the change sequence number on the replication consumer (Col. 11, L. 53 – Col. 12, L. 16);

updating the schema on the replication consumer if the change sequence number on the replication consumer is less than the change sequence number on the replication supplier (Col. 3, L. 12-17; and Col. 10, L. 49-58); and

propagating a schema update from the replication supplier to each replication consumer (Col. 12, L. 32-49).

4. Regarding claim 2, Hirashima teaches the method of claim 1, further comprising: replacing contents of a schema entry on each replication consumer with contents of a schema entry on the replication supplier (Col. 8, L. 7-18; and Col. 12, L. 40-49).

5. Regarding claim 3, Hirashima teaches the method of claim 3, wherein contents are replaced using an update operation on the schema entry (ex. modify operation is as update operation) (Col. 10, L. 31-48; figure 18).

6. Regarding claim 4, Hirashima teaches the method of claim 1, further comprising: maintaining the schema on a master supplier server (Col. 1, L. 52-65).

7. Regarding claim 5, Hirashima teaches the method of claim 4, further comprising: copying the schema to a plurality of servers after updating the master supplier (Col. 8, L. 5-18).

8. Regarding claim 6, Hirashima teaches the method of claim 1, further comprising:
holding the change sequence number on the replication consumer in an attribute (Col.
18, L. 30-57).

9. Regarding claim 7, Hirashima teaches the method of claim 1, further comprising:
querying the schema with standard Lightweight Directory Access Protocol operations
(ex. searching is a form of querying) (Col. 2, L. 11-18).

10. Regarding claim 8, Hirashima teaches the method of claim 1, further comprising:
modifying the schema with standard Lightweight Directory Access Protocol operations
(Col. 12, L. 18-25).

11. Regarding claim 9, Hirashima teaches the method of claim 1, wherein the
schema is updateable on an updateable master (Col. 8, L. 9-13; and Col. 9, L. 20-31).

12. Regarding claim 10, Hirashima teaches a method of schema replication in a
directory server, comprising:

updating a schema at a replication supplier (Col. 2, L. 8-10 and L. 19-26; and
Col. 8, L. 9-13, and L. 32-42, and L. 64 – Col. 9, L. 4);

computing a change sequence number (Col. 3, L. 12-17; and Col. 10, L. 49-55);

placing the change sequence number in an attribute on the replication supplier
(Col. 2, L. 19-26; and Col. 11, L. 30-43);

initiating a replication session to a replication consumer (Col. 9, L. 61 – Col. 10,
L. 2);

reading the change sequence number on the replication consumer (Col. 11, L. 53
– Col. 12, L. 16);

updating the schema on the replication consumer if the change sequence
number on the replication consumer is less than the change sequence number on the
replication supplier (Col. 3, L. 12-17; and Col. 10, L. 49-58);

propagating a schema update from the replication supplier to each replication
consumer (Col. 12, L. 32-49);

replacing contents of a schema entry on each replication consumer with contents
of a schema entry on the replication supplier (Col. 8, L. 7-18; and Col. 12, L. 40-49);

maintaining the schema on a master supplier server (Col. 1, L. 52-65);

copying the schema to a plurality of servers after updating the master supplier
(Col. 8, L. 5-18);

holding the change sequence number on the replication consumer in an attribute
(Col. 18, L. 30-57);

querying the schema with standard Lightweight Directory Access Protocol
operations (ex. searching is a form of querying) (Col. 2, L. 11-18); and

modifying the schema with standard Lightweight Directory Access Protocol
operations (Col. 12, L. 18-25).

13. Regarding claim 21, Hirashima teaches a computer system for schema replication a directory server, comprising:

- a processor (Col. 8, L. 43-45);
- a memory (Col. 8, L. 43-45); and
- software instructions stored in the memory for enabling the computer system under control of the processor (Col. 8, L. 47-53), to perform:
 - updating a schema at a replication supplier (Col. 2, L. 8-10 and L. 19-26; and Col. 8, L. 9-13, and L. 32-42, and L. 64 – Col. 9, L. 4);
 - computing a change sequence number (Col. 3, L. 12-17; and Col. 10, L. 49-55);
 - placing the change sequence number in an attribute on the replication supplier (Col. 2, L. 19-26; and Col. 11, L. 30-43);
 - initiating a replication session to a replication consumer (Col. 9, L. 61 – Col. 10, L. 2);
 - reading the change sequence number on the replication consumer (Col. 11, L. 53 – Col. 12, L. 16);
 - updating the schema on the replication consumer if the change sequence number on the replication consumer is less than the change sequence number on the replication supplier (Col. 3, L. 12-17; and Col. 10, L. 49-58); and
 - propagating a schema update from the replication supplier to each replication consumer (Col. 12, L. 32-49).

14. Regarding claim 22, Hirashima teaches the computer system of claim 21, wherein the software instructions further comprise instructions to perform:

replacing the contents of a schema entry on each replication consumer with contents of a schema entry on the replication supplier using an update operation (Col. 8, L. 7-18; and Col. 12, L. 40-49; and Col. 10, L. 31-48; figure 18).

15. Claims 11-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Shih et al. (Shih) (US 6,615,223 B1).

16. Regarding claim 11, Shih teaches a method of defining a schema in a directory server, comprising

identifying an object class in the schema (Col. 5, L. 60 – Col. 6, L. 2);
placing the object class on an entry (Col. 5, L. 60 – Col. 6, L. 2);
storing a data element in an attribute in the directory server used by the schema (Col. 6, L. 2-10);

extending the schema with a new object class and a new attribute (Col. 6, L. 2-13; and Col. 8, L. 55-61);

describing a document with a private field comprising a description of the object class and the attribute (Col. 5, L. 60-65; and Col. 7, L. 8-58); and

representing the data element as an attribute-data pair (ex. Manager = "Jim Smith": Jim Smith is an attribute-data pair which includes last and first name) (Col. 8, L. 55-62; and figure 8).

17. Regarding claim 12, Shih teaches the method of claim 11, further comprising:
defining the object class in the directory server (Col. 5, L. 60-65);
storing the object class in the directory server (Col. 5, L. 55-65; and Col. 6, L. 5);
and
maintaining integrity of the data element stored in the directory server is by
imposing constraints on data values (Col. 7, L. 17-30).

18. Regarding claim 13, Shih teaches the method of claim 11, wherein the object class defines allowed attribute types and required attribute types (ex. Last Name and First Name are required attribute types; and Tel. No, State, and Manager are allowed attribute types) (figure 2C; and Col. 6, L. 37-52).

19. Regarding claim 14, Shih teaches the method of claim 11, wherein the attribute is multi-valued (figure 4, Col. 7, L. 49-58).

20. Regarding claim 15, Shih teaches the method of claim 11, wherein the attribute is single-valued (Col. 6, L. 5-13; figure 2C).

21. Regarding claim 16, Shih teaches the method of claim 11, wherein the private field is a human-readable description (ex. Description column) (Col. 7, L. 18-30).

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22. Regarding claim 17, Shih teaches the method of claim 11, wherein the attribute-data pair comprises a descriptive attribute associated with a data element (ex. "Manager" is a descriptive attribute that is associated with a data element "Jim Smith") (Col. 8, L. 54-61).

23. Regarding claim 18, Shih teaches the method of claim 11, wherein the entry in the directory server is customizable (Col. 5, L. 65 – Col. 6, L. 37; and figure 5).

24. Regarding claim 19, Shih teaches the method of claim 11, wherein the attribute available for the entry in the directory server is customizable (Col. 5, L. 65 – Col. 6, L. 37; and figure 5).

25. Regarding claim 20, Shih teaches a method of defining a schema in a directory server, comprising

- identifying an object class in the schema (Col. 5, L. 60 – Col. 6, L. 2);
- placing the object class on an entry (Col. 5, L. 60 – Col. 6, L. 2);
- storing a data element in an attribute in the directory server used by the schema (Col. 6, L. 2-10);
- extending the schema with a new object class and a new attribute (Col. 6, L. 2-13; and Col. 8, L. 55-61);
- describing a document with a private field comprising a description of the object class and the attribute (Col. 5, L. 60-65; and Col. 7, L. 8-58);

representing the data element as an attribute-data pair (ex. Manager = "Jim Smith": Jim Smith is an attribute-data pair which includes last and first name) (Col. 8, L. 55-62; and figure 8);

defining the object class in the directory server (Col. 5, L. 60-65);

storing the object class in the directory server (Col. 5, L. 55-65; and Col. 6, L. 5);

and

maintaining integrity of the data element stored in the directory server by imposing constraints on data values (Col. 7, L. 17-30).

26. Claims 23-27 list all the same elements of claims 4-8, but in system form rather than method form. Therefore, the supporting rationale of the rejection to claims 4-8 applies equally as well to claims 23-27.

27. Claim 28 list all the same elements of claim 1, but in apparatus form rather than method form. Therefore, the supporting rationale of the rejection to claim 1 applies equally as well to claims 28.

28. Claims 29, 30 list all the same elements of claims 11, 12, but in apparatus form rather than method form. Therefore, the supporting rationale of the rejection to claims 11, 12 applies equally as well to claims 29, 30.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MINH-CHAU N. NGUYEN whose telephone number is

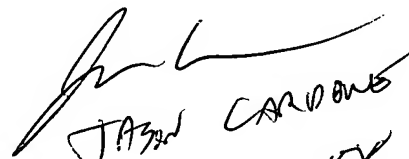
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(571) 272-4242. The examiner can normally be reached on Monday-Friday from 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, VALENCIA M. WALLACE can be reached on (571) 272-6159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner: Minh-Chau Nguyen
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JASON CARROLL
PRIMARY EX
A212145